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ENUMERANTUR PLANTAE DAKOTAE SEPTENTRIONALIS VASCULARES.—XIV.

ENUMERAVIT J. LUNELL.

The Vascular Plants of North Dakota.—XIV.

With Notes by J. Lunell.

APPENDIX (*continued*).

All the following numbers previous to no. 1246 refer to certain plants recorded under the above heading in earlier issues of this journal and ought to be looked up.

Insert next after no. 4. *Cystopteris fragilis*:

THELYPTERIS Schmidel, Ic. Pl. & Am. Pavt. Manip. , 1 sec. 1, p. 45.

1246. *Thelypteris Dryopteris* (Linn.) Slosson, Rydb. Fl. R. M. 1069. (1917).

Polypodium Dryopteris Linn. Sp. Pl. 1093. (1753).

In the sand hills near Anselm, Ransom Co. (O. A. Stevens).

41. *Alisma superbum*. Rydberg in Fl. R. M. 27. (1917) considers this identical with *A. brevipes* Greene.

72. *Torresia* Ruiz y Pavon, Prodr. 125. (1794) has displaced the older genus names *Hierochloe* and *Savastana* in the latest botanical nomenclature.

98. *Deyeuxia americana* (Scribn.) Lunell. *Calamagrostis americana* Scribn. in Rydb. & Shear U. S. Dept. Agr. Bull. Agrost. V. 27. *C. hyperborea* Kearney, not Lange.

100. *Deyeuxia elongata* (Kearney) Lunell. *Calamagrostis elongata* Rydb. Fl. R. M. 58 & 1060. (1917).

Insert next after no. 103, *Koeleria cristata*:

1247. *Koeleria gracilis* Pers. l. c. Prairies.

DANTHONIA DC. Fl. France 3:22. (1805).

1248. *Danthonia spicata* Beauv.; R. & S. Syst. 2:690. (1817).
N. D. acc. to Britt. Man. (1901).

111. *Spartina pectinata* Bosc. ex Link, Jahrb. I. III. 92.
(1829.) Older name.

Insert next before no. 123. *Daluca Hallii*:

1249. *Daluca campestris* (Rydb.) Lunell. *Festuca campestris*
Rydb. Mem. N. Y. Bot. Gard. I:57. (1900), probably to replace no.
123.

124. *Distichlis stricta* (Torr.) Rydb. Bull Torr. Bot. Club
602 (1905). *D. spicata* Coult. & Nels., not Greene.

1250. *Panion pratensiforme* (Rydb.) Lunell *Poa pratensi-*
formis Rydb. Fl. R. M. 79. (p. 1060) 1917. *P. pseudopratensis*
Scribn. & Rydb Contr. U. S. Nat. Herb. 3:531 1896. not *P. pseudo-*
pratensis Beyer 1891. Leeds.

144. Replaced in Rydb. Fl. R. M. 84. (1917) by *Puccinellia*
Nuttalliana (Schultes) Hitchc.

1252. *Zeia Griffithsii* (Scribn & Sm.) Lunell *Agropyron*
Griffithsii Scribn & Sm. ex Piper Proc. Biol. Soc. Wash. XVIII.
148. N. D. acc. to Rydb. Fl. R. M. (1917).

182. *Terrellia curvata* (Piper) Lunell. *Elymus curvatus* in
Bull. Torr. Bot. Club 233. (1903).

1253. *Cyperus diandrus* Torr. Cat. Pl. N. Y. 99. (1879).
In the sand hills near Anselm, Ransom Co. (O. A. Stevens).

194. *Eleocharis monticola laeviseta* Fern. reinstated in Rydb.
Fl. R. M. 106. (1917.)

207. *Scirpus paludosus* A. Nels. Bull. Torr. Bot. Club.
26:5. (1899). Vide Rydb. Fl. R. M. 110. (1917).

214. *Carex praegracilis* W. Boott in Coult. Bot. Gaz. IX:87.
(1884) to replace this name.

1254. *Carex moniliformis* Britton in Geol. Survey N. Jersey
II:278. (1889). N. D. acc. to Britt. Man. (1901).

1255. *Carex pubescens* Muhl.; Willd. Sp. Pl. 4:221. (1806).
N. D. acc. to Britt. Man. (1901).

1256. *Carex tribuloides* Wahl. Kongl. Vet. Akad. Handl.
(II.) 24:145. (1803). N. D. acc. to Britt. Man. (1901).

276. *Allium textile* Nels. & Macb. Bot. Gaz. 56:470. (1913).
A. reticulatum Fraser, not Presl.

1257. *Bermudiana campestris* (Bicknell) Lunell. *Sisyrin-*
chium campestre Bickn. in Bull Torr. Bot. Club 300. (1899).

N. D. acc. to Britt. Man. 1901, Gray Man. 1908 and Rydb. Fl. R. M. 1917.

298. *Limnorchis viridiflora* (Cham) Rydb. Torr. Bot. Club 28:616. (1901). *Habenaria hyperborea* Coult., not R. Br.

1258. *Ulmus fulva* Michx. Fl. Bor. Am. 1:173. (1803), acc. to Britt. Man. 1901.

348. *Lapathum maritimum* (Linn.) Lunell. *Rumex maritimus* Linn. Sp. Pl. 335. (1753). f. *R. persicarioides* Am. Authors, not Linn.

1259. *Polygonum buxiforme* Small in Bull. Torr. Bot. Club XXXIII:56. (1906) Leeds.

1260. *Polygonum neglectum* Besser, Enum. Pl. Volh. 45. Leeds.

1261. *Polygonum sawatchense* Small, Bull. Torr. Bot. Club XX:213. (1893). Leeds.

1262. *Polygonum achoreum* S. F. Blake in Rhodora XIX:232. (1917). Leeds, Towner.

1263. *Chenopodium desiccatum* A. Nels. Bot. Gaz. 34:362. (1902). Towner.

1264. *Atriplex confertifolia* (Torr.) Wats. Proc. Am. Acad. 9:119. (1874). Medora.

1265. *Corispermum nitidum* Kit. et Schult. Oestr. Fl. ed. 2, 1:7. (1814). Sheyenne River.

407. *Acnida altissima* Riddell ex Moq. in DC. Prodr. XIII: 2. 277.

1266. *Allionia diffusa* Heller, Minn. Bot. Stud. 2:33. (1898) N. D. acc. to Rydb. Fl. R. M. 1917.

SAPONARIA Linn. Sp. Pl. 408. (1753).

1267. *Saponaria officinalis* Linn. l. c. Leeds. Escape in old gardens.

Insert before 468, *Clematis virginiana*:

1268. *Clematis ligusticifolia* Nutt; T. & G. Fl. N. A. 1:9. (1838). West of the rooth mer.

477. *Plectrornis virescens* (Nutt.) Lunell. *Delphinium virescens* Nutt. Gen. 2:14. (1818).

502. *Lesquerella arenosa* (Richards.) Rydb. in Bull Torr. Bot. Club 236. (1902.)

503. *Physaria brassicoides* Rydb. in Bull. Torr. Bot. Club 279. (1901).

523. *Turritis ovata* Pursh Fl. Am. Sept. 11:436. (1814).

Arabis ovata (Pursh) Poir. Encycl. Suppl. V:587. *A. hirsuta* Hook., not Scop.

1269. **Turritis Drummondii** (A. Gray) Lunell *Arabis Drummondii* A. Gray, Proc. Am. Acad. VI:187. Gray Man. V:69. *A. confinis* Wats. Proc. Am. Acad. XXII:466. Devils Lake.

524. *T. Drummondii* var. *brachycarpa* (Gray Man. V:69). *A. confinis* var. *brachycarpa* Wats. & Coult. in Gray Man. VI:67. This does not grow at Devils Lake, but is reported from other parts of the state. *A. dakotica* Greene is another relative unknown to us.

Insert after no. 529, *Brassica campestris*:

1270. **Brassica juncea** (Linn.) Corson, Bull. Soc. Bot. France 6:609, (1859.)

Sinapis juncea Linn. Sp. Pl. 668. (1753). Leeds.

STANLEYA Nutt. Gen. 2:71. (1918).

1271. **Stanleya pinnata** (Pursh) Britt. Trans. N. Y. Acad. Sci. 8:62, (1888). Dakota acc. to Nels. Man. 1909.

1272. **Stanleya glauca** Rydb. Bull. Torr. Bot. Club 236. (1902). N. D. acc. to Rydb. Fl. R. M. 1917.

Insert after no. 136, *Peritoma serrulatum*:

1273. **Peritoma serrulatum** var. **clavatum** Lunell, var. nov. Siliquae crassae, clavatae, turgidae, Petala integra neque 3-dentata.

Pods thick, swelled, clavate, Petals entire, not 3-toothed. York, Aug. 9, and Sept. 2. 1918.

Insert after no. 540. *Parnassia palustris*:

1274. **Parnassia montanensis** Fern. & Rydb. in N. Amer. Fl. XXII:79. (1908).

Some of our plants no doubt belong here, while others exhibit characters of both this species and *P. palustris*,

Insert next after no. 551, *Pentaphyllum concinnum*:

1275. **Pentaphyllum divisum** (Rydb.) Lunell. *Potentilla divisa* Rydb. Fl. R. M. 416. (1917).

Potentilla concinna divisa Rydb. Bull. Torr. Bot. Club 23:431. Leeds.

1276. **Potentilla camporum** Rydb. in N. Am. Fl. XXII:319. (1908). Butte.

572. **Chamaerhodos Nuttallii** Pickering ex Rydb. in N. Am. Fl. XXII:377. (1908). *C. erecta* Hook, not Bunge.

Insert next before no. 585, *Eupatorium Brittonianum*:

1277. **Eupatorium gryposepalum** (Wallr.) Lunell. *Agrimonia gryposepala* Wallr. Beitr. Bot. I:49. (1840). *A. hirsuta* Bickn. Bull. Torr. Bot. Club 23:509. (1896). Turtle Mountains.

583. *Rubus pubescens* Raf. in Med. Repos. N. Y. Sec. III:11. 333. (1811).

1278. **Rosa alcea** Greene, Leaflets II:63. (1910). Devils Lake.

1279. **Rosa Engelmanni** S. Wats. Gard. & For. 2:376. (1889). N. D. acc. to Rydb. Fl. R. M. 1917.

1280. **Rosa Woodsii** Lindl. Mon. Ros. 21. (1820). N. D. acc. to Rydb. Fl. R. M. 1917.

Insert next before 598, *Amelanchier macrocarpa*:

1281. **Amelanchier leptodendron** Lunell, sp. nov.

ANALYTICAL KEY.

Leaves ovate or obovate, at least in the young leaves acute at both ends; racemes and petals small; a tree.....*A. leptodendron*

Leaves oblong with rounded apex and rounded or subcordate base; racemes and petals large; a shrub.....*A. macrocarpa*

Arbor teres, 3-5 m. alta, cortice plano cinereo, ramulis canis vel rubrofusis. Folia matura perviridia, utrimque glabra, firma, ovata—obovata, circumferentia basin versus plerumque angustata, magis minusve acuta vel cuneiformis, apice acuto, margine dimidio superiore irregulari-dentato. Florum racemi 2-3 cm. longi, pedicelli 0.5—1 cm. longi, sepala triangulari-lanceolata vel latiora, petala spathulata, 5-6 mm. longa. Racemi pomiferi 5 cm. longi. Pomum parvum, 5 mm. diametro. Gemmae hiemales pubescentes.

A slender tree (scarcely appearing as a brush, as I have been unable to discover any branching-out from the ground), 3-5 m. high, with smooth, ashy gray bark and gray or reddish twigs. Leaves after maturity bright green, glabrous on both sides, firm, ovate—obovate, the proportions varying in centimeters 7:6, 7:5.5, 6:4.5, 6:4, 5:4, 5:3, 4:5.4, 4:5.3, and 4:3, the outline generally becoming narrowed or more or less acute or cuneiform toward the base, with an acute apex at least in young leaves (a rounded or notched apex often caused by some injury to the top), and an irregular dentation of the margin from the middle to the apex. Besides, mature leaves present quite variable outlines. Flowering racemes 2-3 cm. long, pedicels 0.5—1 cm. long; sepals triangular-lanceolate or broader; petals spathulate, 5-6 mm. long. Fruiting raceme 5 cm. long. Pome small, 5 mm. in diameter (but only one seen). Winter buds pubescent.

Apt to be found on hillsides covered with a dense wooded vegetation. The type was collected by the writer on May 15 and Sept. 3, 1918 in the Turtle Mountains of Rolette Co.

Insert after no. 599, *Oxyacantha chrysocarpa*:

1282. **Oxyacantha mollis** (T. & G.) Lunell. *Crataegus mollis*

(T & G.) Scheele, *Linnaea*, 21:569. (1848.) Fargo (O. A. Stevens).

1283. **Oxyacantha succulenta** (Schrad.) Lunell. *Crataegus succulenta* Schrad. Turtle Mountains.

1284. **Oxyacantha Howellii** (Heiser) Lunell. *Crataegus Howellii* Heiser, nom. nov. *Crataegus columbiana* Howell Fl. N. W. Amer. 163. (1903), not *C. columbiana* Sargent in Coult. Bot. Gaz. XXXI:229. (1901). Sargent's plant is from Columbia, Texas. *O. Howellii* grows in N. D. acc. to Rydb. Fl. R. M. 450. (1917).

607. *Amorpha angustifolia* (Pursh) Boynton in Biltmore Bot. Studies 1:139. *A. fruticosa* Coult, not L.

657. *Aragallus angustatus* Rydb. Bull. Torr. Bot. Club 34:421-4. (1907) is declared in Fl. R. M. 521. (1917) to be a synonym antedating my plant, which Dr. Nelson in 1908 acknowledged as a valid new species. In his manual of 1909 he made *A. angustatus* a synonym of *A. Lamberti*. It is probable that none but perhaps Dr. Rydberg has seen both species.

1242. *Hedysarum cinerascens* Rydb. Mem. N. Y. Bot. Gar. I:257. (1900).

1285. **Linum pratense** (Norton) Small in N. Am. Fl. XXV:69. (1907). Our plant seems to belong here, not to *L. Lewisii*. Leeds, York.

Insert before no 602, *Nezera sulcata*:

ANALYTICAL KEY.

Perennial, branched from the base, fruiting pedicels 4-6 mm.

long *N. compacta*.

Annual, simple or branched above, fruiting pedicels 2-3 mm

long *N. sulcata*

1286. **Nezera compacta** (A. Nels.) Lunell. *Linum compactum* A. Nels. in Bull. Torr. Bot. Club 31:241. (1904). Leeds, York.

Insert after no. 707, *Celastrus scandens*:

1287. **Euonymus atropurpureus** Jacq. Hort. Vind. 2:5, pl. 120. (1772).

In the sandhills near Anselm, Ransom Co. (O. A. Stevens).

Insert next after 736, *Lophion Rydbergii*:

1288. **Lophion rugulosum** (Greene) Lunell. *Viola rugulosa* Greene, Pittonia V:26 (1887). Nearly related to *L. Rydbergii* and perhaps within our area.

Insert next after no. 740, *Nuttallia decapetala*:

1289. **Mentzelia oligosperma** Nutt.; T. & G. Fl. N. A. I:533. (840). N. D. acc. to Rydb. Fl. R. M. 574. (1917).

744. *Elaeagnus commutata* Beruh, in Allg. Thuer. Gartenz II:137. (1843).

Insert next before no. 762: *Epilobium adenocaulon*:

1290. **Epilobium americanum** Haussk. in Oestr. Bot. Zeitschr. XXIX:118. (1879).

Epilobium adenocaulon perplexans Rydb. scarcely Trelease. York.

1291. **Cogswellia montana** (C. & R.) Jones. Contr. West. Bot. 12:34. (1908). N. D. acc. to Rydb. Fl. R. M. 626.

1292. **Cogswellia macrocarpa** (Nutt.) Jones l. c. 33. Dunsieith. Insert before no. 790, *Ossea instolonea*:

1293. **Ossea interior** (Rydb.) Lunell. *Svida interior* Rydb. in Bull. Torr. Bot. Club 572. (1904). 'Turtle Mountains.'

1294. **Meadia salina** (A. Nels.) Lunell *Dodecatheon salinum* A. Nels. Bull. Torr. Bot. Club 28:227. (1901). White Earth.

814. *Anthopogon tonsus* (Lunell) Rydb. in Fl. R. M. 659. (1917).

Insert next after no. 817, *Amarella acuta*:

1295. **Amarella scopulorum** Greene. Leaflets I:55. (1904) Under this name no doubt ought to be known the plant from Pleasant Lake referred to under no. 817. Under the latter number I would refer to a species found by me in the Turtle Mountains, as it resembles closely specimens in my herbarium collected by Prof. Fernald in Maine.

MENYANTHES Linn. Sp. Pl. 145. (1753)

1296. **Menyanthes trifoliata** Linn. l. c. In the sandhills of Anselm, Ransom Co. (O. A. Stevens).

Insert next after no. 846, *Fonna Hoodii*:

1297. **Fonna andicola** (Britton) Lunell. *Phlox andicola* (Britt.) E. Nels. Rev. W. N. A. Phloxes II. (1899). *Phlox Douglasii andicola* Britt. Mem. Torr. Bot. Club 5:269. 1894).

Specimens with calyx tube 2mm. and its teeth 3mm., corolla tube 8mm. (thus being 3mm longer than the entire calyx), limb of corolla 10-14mm. wide. We place them here with hesitation, as they have not the erect, white stems of *P. andicola*. Leeds.

854. *Heliotropium spathulatum* Rydb. Bull. Torr. Bot. Club 30:262. (1908). *H. curassavicum* Hook, not L.

1298. **Oreocarya perennis** (A. Nels.) Rydb. *O. affinis perennis* A. Nels. Erythea 7:67. (1899). N. D. acc. to Rydb. Fl. R. M. 722. Perhaps a better name for our no. 861.

1299. *Amsinckia intermedia* F. & M.; DC. Prodr. X:117.
 Gray, Bot, Calif. 1.525. Rugby (O. A. Stevens).
 884. *Dracocephalum Nuttallii* Britton.
 895. *Mentha glabrior* (Hook.) Rydberg.
 1300. *Scrophularia dakotana* Lunell, sp. nov.

ANALYTICAL KEY.

- A. Leaf-blades hastately lobed at the base.
 B. Branches of the inflorescence densely glandular-puberulent;
 upper lip of the corolla much shorter than the tube.....*S. occidentalis*
 A. Leaf-blades not hastately lobed at the base.
 B. Branches of the inflorescence densely glandular-
 puberulent; upper lip of the corolla only slightly
 shorter than the tube.....2. *S. dakotana*
 B. Branches of the inflorescence sparingly glandular-puber-
 ulent; upper lip of the corolla as long as the tube.....3. *S. leporella*

Caulis perennis, robustus, quadrangularis, $\frac{1}{2}$ -2m. altus, inflorescentia glandulari-puberulenta. Foliae lanceolata vel ovata, bis serrata, acuta, basi rotundata vel ciliolata neque hastate lobata, nervis subtus puberulentis, praeterea glabra, 5-15cm. longa, 7 petiolis 1-2 cm. longis. Calyx 3mm altus, lobis 1-5mm altis. Corolla purpureo-flavo-viridis, 11mm. alta; tubus 6mm. altus, calice duplo longior; labia gemina superiora 5mm. longa, erect, oblonga; labia gemina lateralia erecta, inferius reflexum, 3mm. longa. Stamen sterile glabrum, obscure viride, squama ovata obscure viridi latiore quam longa ornatum. Capsula 3-7mm. longa, basi ovata conica.

Stem perennial, stout, square-angled, $\frac{1}{2}$ -2m. high, glandular-puberulent in the inflorescence. Leaves broadly lanceolate or ovate, doubly serrate, acute, the base rounded or, in the larger leaves, cordate, not hastately lobed at the base, puberulent on the nerves beneath, else glabrous, 5-15 cm. long, on petioles 1-2 cm. long. The entire calyx 3mm. high, its lobes 1.5 mm. high. Corolla purplish-yellowish-green, 11mm. high; its tube 6mm. high, twice as long as the calyx; its 2 upper lips 5mm long, erect, oblong, its 2 lateral or lips erect, the lower one reflexed, 3mm. long. Sterile stamen glabrous, dark green with a dark green ovoid scale, which is broader than long, Capsule 3-7mm. long, conical with an ovoid base.

Growing in high ground on prairies. Collected by the writer at Leeds, Benson Co.

1301. *Pentstemon glaber* Pursh, Fl. Am. Sept. 2:738. (1814).
 N. D. acc. to Rydb. Fl. R. M. 769.

1302. *Agoseris scorzoneraefolia* Greene, Pittonia 2:177.
 (1891). Butte, Minnewaukan.

997. *Ambrosia elatior* Linn. *A. artemisiaefolia* a. Gray, not Linn.

1007. *Vernonia corymbosa* Schwein. *V. fasciculata* Coult.
 not Michx.

1303. **Laciniaria punctata** (Hook.) Kuntze, var. *turgida*, Lunell, var. nov.

Terminal head many times larger than the other heads. Leeds, Sept. 2, 1918.

1304. **Laciniaria scariosa** (Linn.) Hill, var. *inconcinna* var. nov. Several lower leaves are shorter than the next upper ones in the series. Leeds, August 27, 1918.

Insert after no. 1041, *Chrysopsis Bakeri*:

1305. **Chrysopsis hirsutissima** Greene, Pittonia 4:153. (1900). N. D. acc. to Rydb. Fl. R. M. 851. (1917).

Insert after no. 1075, *Aster puniceus*:

1306. **Aster Forwoodii** S. Wats. Turtle Mountains.

1125. *Doellingeria pubens* (A. Gray) Rydb. in Bull. Torr. Bot. Club XXXVII:147. (1910).

FILAGO Linn. Sp. Pl. 927. (1753).

1307. **Filago prolifera** (Nutt.) Britt. Mem. Torr. Bot. Club V:329. (1894), acc. to Nelson's Man. 1909.

1308. **Silphium laciniatum** Linn. Sp. Pl. 919. (1753). N. D. acc. to Gray Man. VII.

1155. *Coreopsis Atkinsoniana* Dougl., Lindl. Bot. Reg. t.

1379. 1164. Pursh, Fl. Am. Sept. 2:742. (1814). *Hymenopappus tenuifolius*.

1166. *Tetranuris acaulis* (Pursh) Greene, Pittonia III:265, (1898). *Actinella acaulis* (Pursh).

1309. **Artemisia Bourgeauana** Rydb. in Bull. Torr. Bot. Club XXXVII:454. (1910). N. D. acc. to Rydb. Fl. R. M. 966. (1917).

1197. *Arnica pedunculata* Rydb. Bull. Torr. Bot. Club 24:297. (1897). Dickinson.

1310. **Arnica pedunculata** var. *monocephala* (Rydb.) Lunell, var. nov.

Arnica monocephala Rydb. Mem. N. Y. Bot. Gard. I:435. (1900). Dunsieith.

1203. Without having access to the types Dr. Greene referred this plant to *S. Purshianus* for geographical reasons. Later Dr. Greenman compared it with the types of both *S. Purshianus* and *S. canus* and decided in favor of the latter. Vide no. 1311 also.

1311. **Senecio canus** var. *eradiatus* var. nov. Heads discoid. Butte, Benson Co., not infrequent among related plants.

Leeds, North Dakota,